U.S. DEPARTMENT OF
ENERGY
Office of the Chief
Information Officer

User Guide
Remote Access to VDI/Workplace Using PIV

Innovation & Engineering Office (IM-64)
April 2015

Table of Contents

1 Overview

As mandated by the Homeland Security Presidential Directive 12 (HSPD-12), Office of Management and Budget (OMB) M 11-11, and Department of Energy (DOE) O 206.2, the Office of the Chief Information Office (OCIO) Energy IT Services (EITS) has deployed hardware, software, and configuration changes that enable EITS customers to log on to their computers with their HSPD-12 credentials.

The HSPD-12 directive also covers the implementation of virtual desktops. Personal identity verification (PIV) authentication is integrated in the virtual desktop infrastructure (VDI) design and implementation. VDI is accessible from DOE-provided trusted EITS zero-clients, laptops, and conventional desktops, also known as government-furnished equipment (GFE). VDI can also be securely accessed from external clients, such as personal computers, over the Internet, which is one of the great benefits of VDI technology.

As a remote VDI user, you must authenticate your identity with your PIV card per the HSPD-12 directive. In certain cases when you cannot use your PIV card, you can use your RSA token to log on.

The tables below list Internet browser and operating system versions tested for their functionality with remote PIV with VDI.

1.1 Web Browsers

Browser	Version	Functions with PIV?
Microsoft Internet Explorer	9.0.8112.16421	Yes
Microsoft Internet Explorer	11.0.9600.17358	Yes
Google Chrome	38.0.2125.111 m	Yes (See Appendix C)
Safari	6.2.3 and above	Yes
Mozilla Firefox	31.1.1	Not supported. Reconfiguration is required to support PIV and is not recommended.

1.2 Operating Systems

| Operating System	Version	Function with PIV?
Windows	7.0 and above	Yes
Personal Mac	10.10.2 and above	Yes
GFE Mac	10.8.5/10.9.5/10.10.2	Yes

2   Types of Smart Card Readers and Installation

The three types of smart card readers used in the DOE environment are displayed below. To learn more about card readers, see HTTPS://POWERPEDIA.ENERGY.GOV/WIKI/SMART_CARD_READER.

| 1. Internal Card Reader	2. Portable Card Reader	3. Standard Card Reader

3   Install the External Reader on a PC

To install the external card reader, connect the card reader to your workstation. The card reader self-installs. To view the status of the installed card reader, go to the lower left of the Windows screen. Select **Start➔ Devices and Printers**.
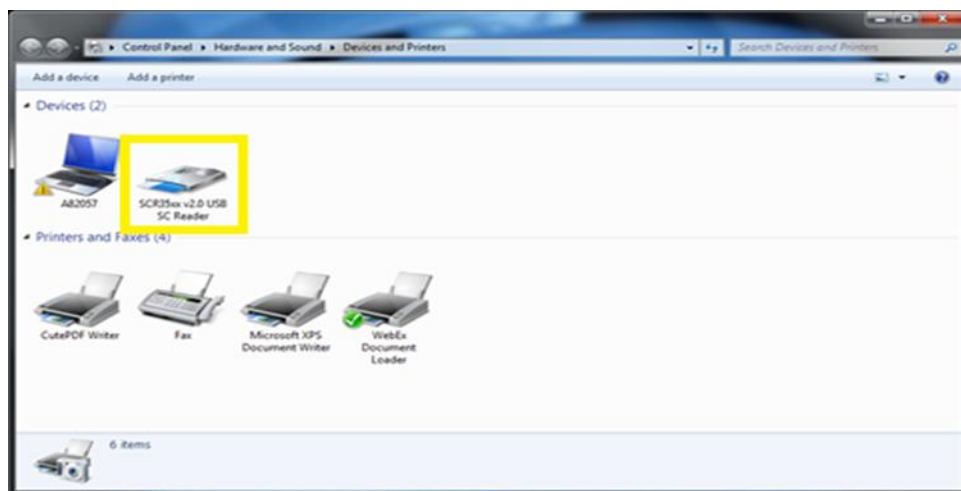
4 ⊞ Access from a GFE Laptop

1. Once the card reader has been installed, insert your PIV card into the reader.
2. Open web browser , type HTTPS://MYDESKTOP-TEST.DOE.GOV, and press **Enter**.
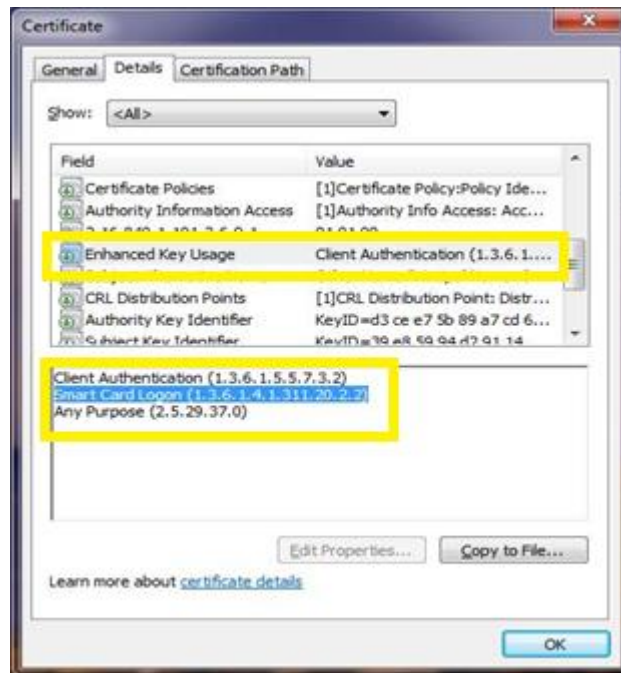3. Select **Access VDI using your PIV card**.
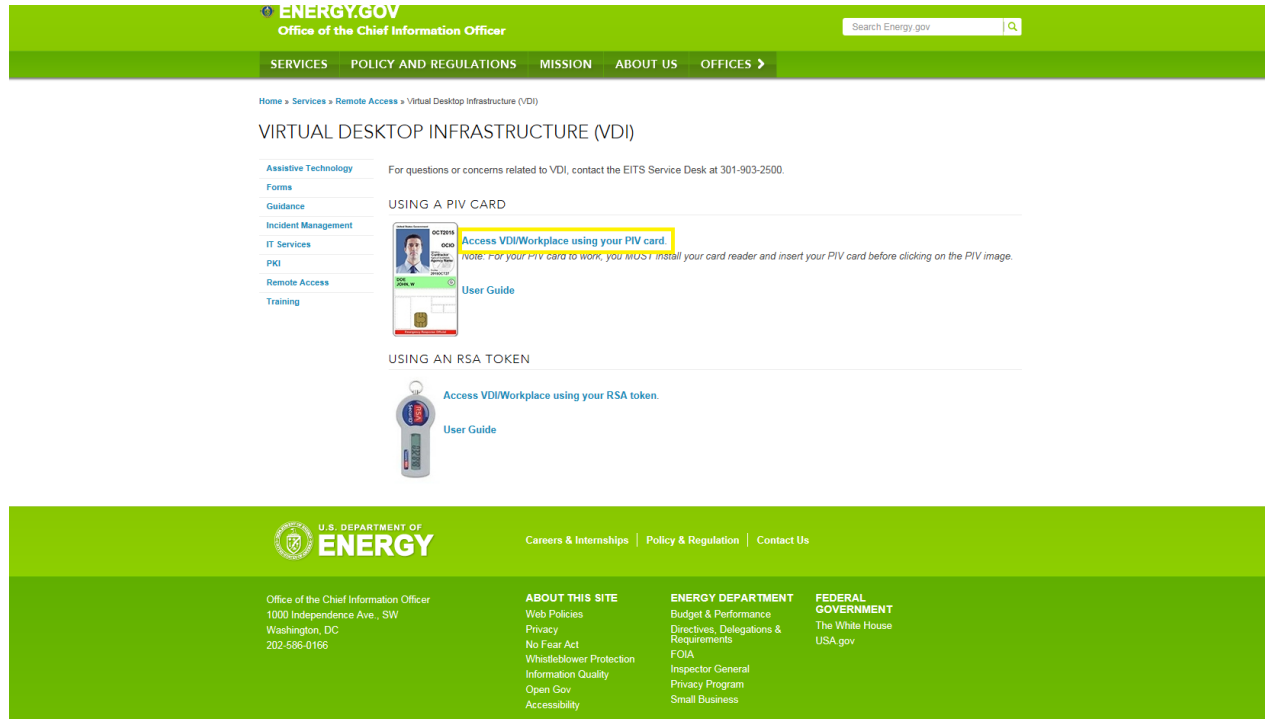
4. A certificate box displays.

5. To determine the correct certificate is being used, select **Click here to view certificate properties**. Select the **Detail** tab.

a. Scroll down and select **Enhanced Key Usage** and look for Smart Card Logon as shown below.

b. After verifying the certificate, select **OK**.

   *Note: The desktop does not ask for your PIN because it was cached after you logged onto your GFE laptop.*

6. The desktop auto-launches. Select **OK** on the DOE Security Banner screen.
7. Type your PIN at the desktop and press **Enter**.

   Note: If you see the username and password fields, select the **Other Credentials** *button. Select the PIV card, type your PIN, and press* **Enter**.

8. You are now logged on to the VDI desktop.

5 ⊞ Access from a Home Personal Computer

1. Download and install the latest receiver from HTTP://WWW.CITRIX.COM/GO/RECEIVER.HTML.
2. Insert a card reader if necessary. The card reader self-installs. To view the status of the installed card reader, go to the lower left of the Windows screen. Select **Start➔ Devices and Printers**.
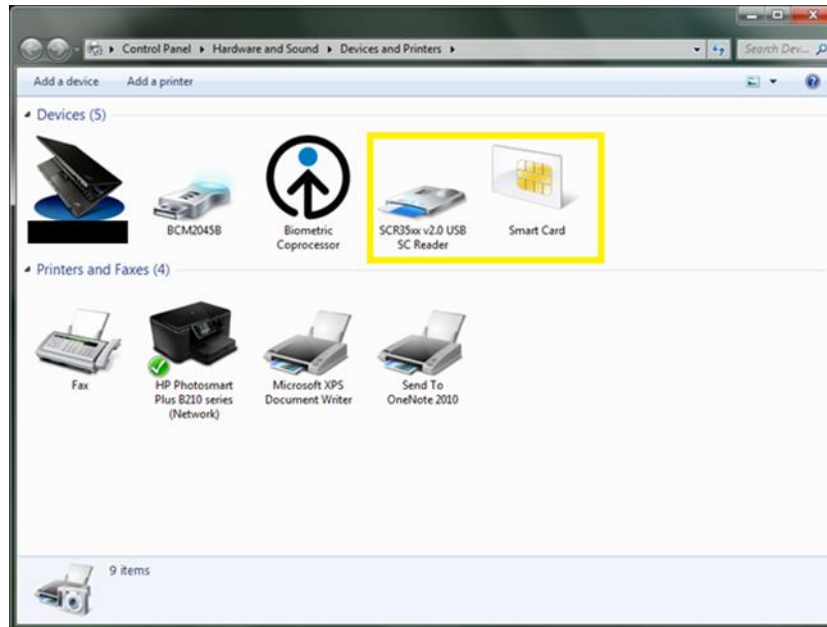
3. Once the card reader has been installed, insert your PIV card into the reader.
4. Open web browser, type in HTTPS://MYDESKTOP-TEST.DOE.GOV, and press **Enter**.

5. Select **Access VDI/Workplace using your PIV card**.
6. A certificate box displays.

7. To determine the correct certificate is being used, select **Click here to view certificate properties**. Select the **Detail** tab.

a. Select **Enhanced Key Usage** and look for Smart Card Logon as shown below.
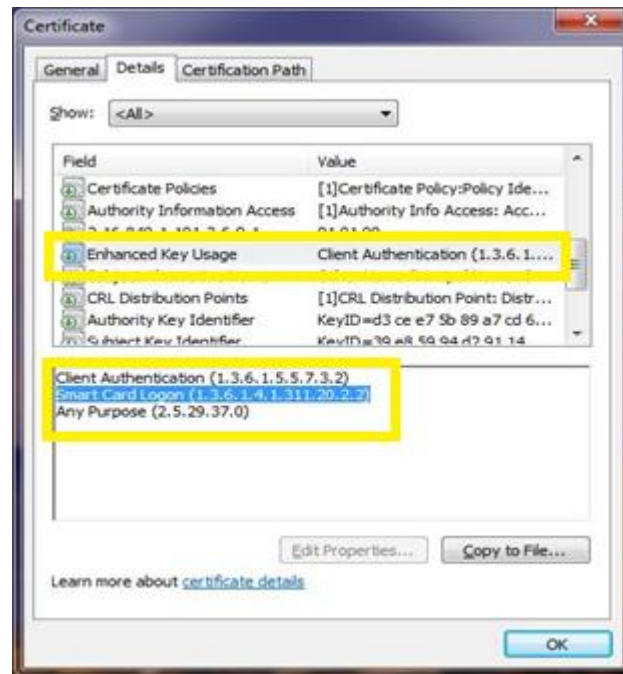
b. After verifying the certificate, select **OK**.
a. The PIN prompt box displays.

8. Type your PIN and select **OK**. If you do not see the PIN prompt box, check to make sure it did not pop up behind another window.
9. The desktop auto-launches. Select **OK** on the DOE Security Banner screen.
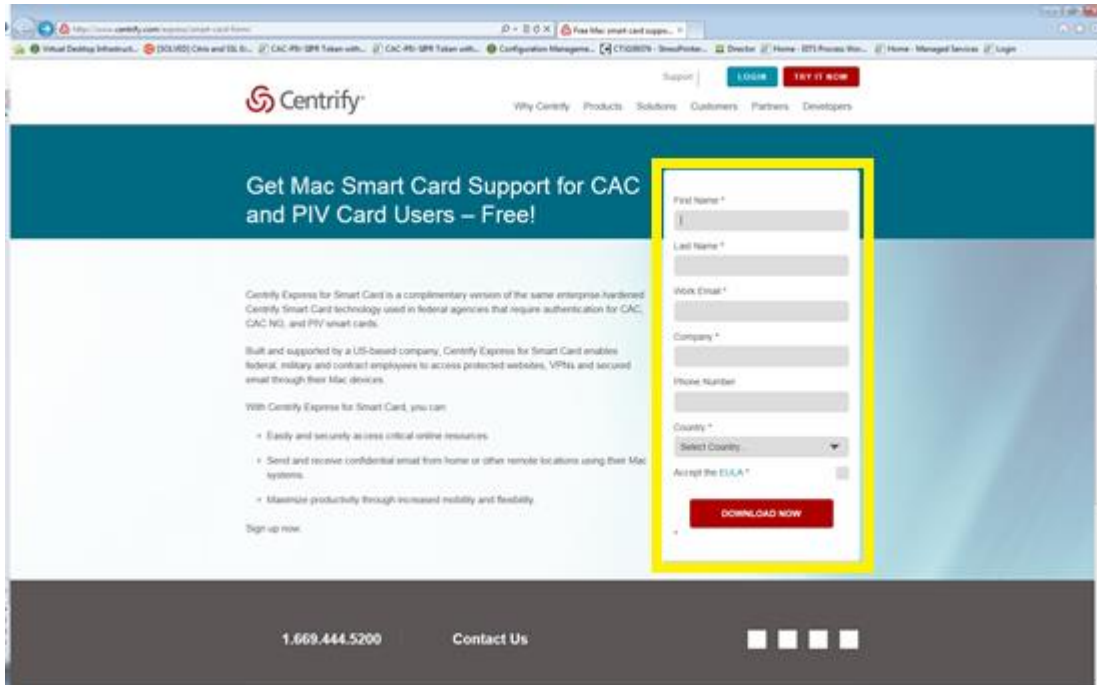10. Type your PIN at the desktop prompt and press **Enter**.

> *Note: If you see the username and password fields, select the*
> **Other Credentials** *button. Select the PIV card and type your PIN.*

11. You are now logged on to the VDI desktop.

6  Access from a Home Personal Mac

If you are a Mac user and want to access VDI using your PIV card, you must have the operating system, X Yosemite 10.10.2 or higher and Centrify Express for Smartcard installed.

1. Download and install the latest Mac receiver from HTTP://WWW.CITRIX.COM/GO/RECEIVER.HTML.
2. Complete the form at HTTP://WWW.CENTRIFY.COM/EXPRESS/SMART-CARD-FORM and accept the End User License Agreement. Select **Download Now** to see Centrify Express for Smartcard.

3. Select **Download for Mac OS 10.7, 10.8, 10.9, 10.10.**

4. **Install** Centrify Express for Smartcard.
5. To verify that Centrify Express for Smartcard is installed, select the **Launchpad**. Find the
   Smart Card Assistant.

6. Open Safari and type HTTPS://MYDESKTOP-TEST.DOE.GOV.
7. Insert the card reader.

8. Insert your PIV card.

9. Select **Access VDI using your PIV card**.

10. You ae prompted to select a certificate. Select **Show Certificate** and scroll down to Purpose #2 Smartcard Logon.
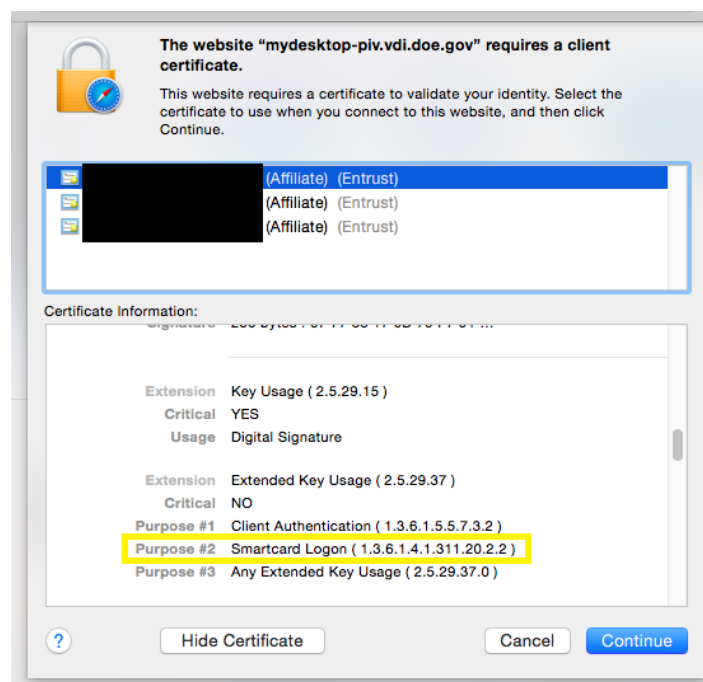
11. After verifying the certificate, select **Continue**.
   a. Centrify Express for Smartcard stores this option in the keychain, and you are not prompted to select the certificate again.
   b. If you accidentally select the wrong certificate, see appendix A for the steps to remove the certificate from the Centrify Express for Smartcard keychain.
12. At the next prompt, type your PIV card PIN, which is your keychain password. Select **OK**.
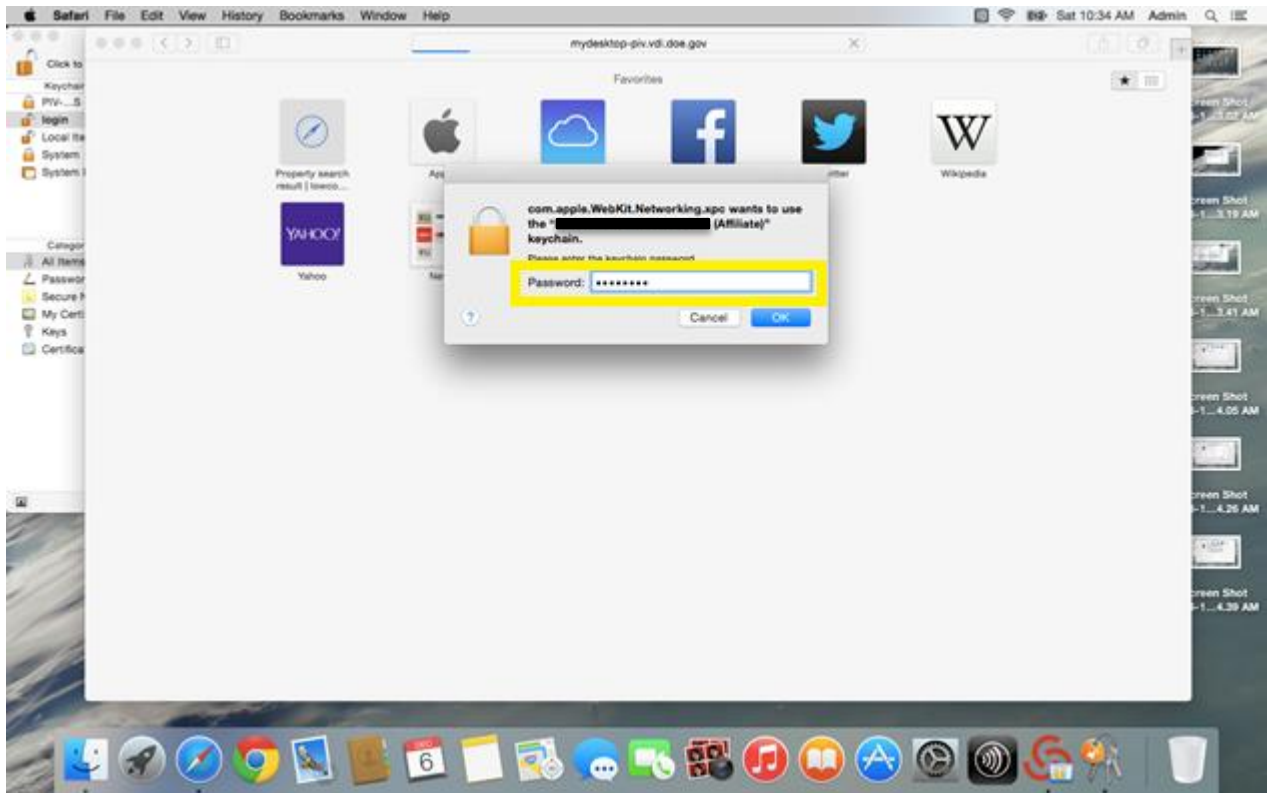
13. At the prompt **Do you want to trust the website "mydesktop-piv.vdi.doe.gov" to use "Citrix Receiver Plug-in?",** select **Trust** to unblock the Citrix plug-in.
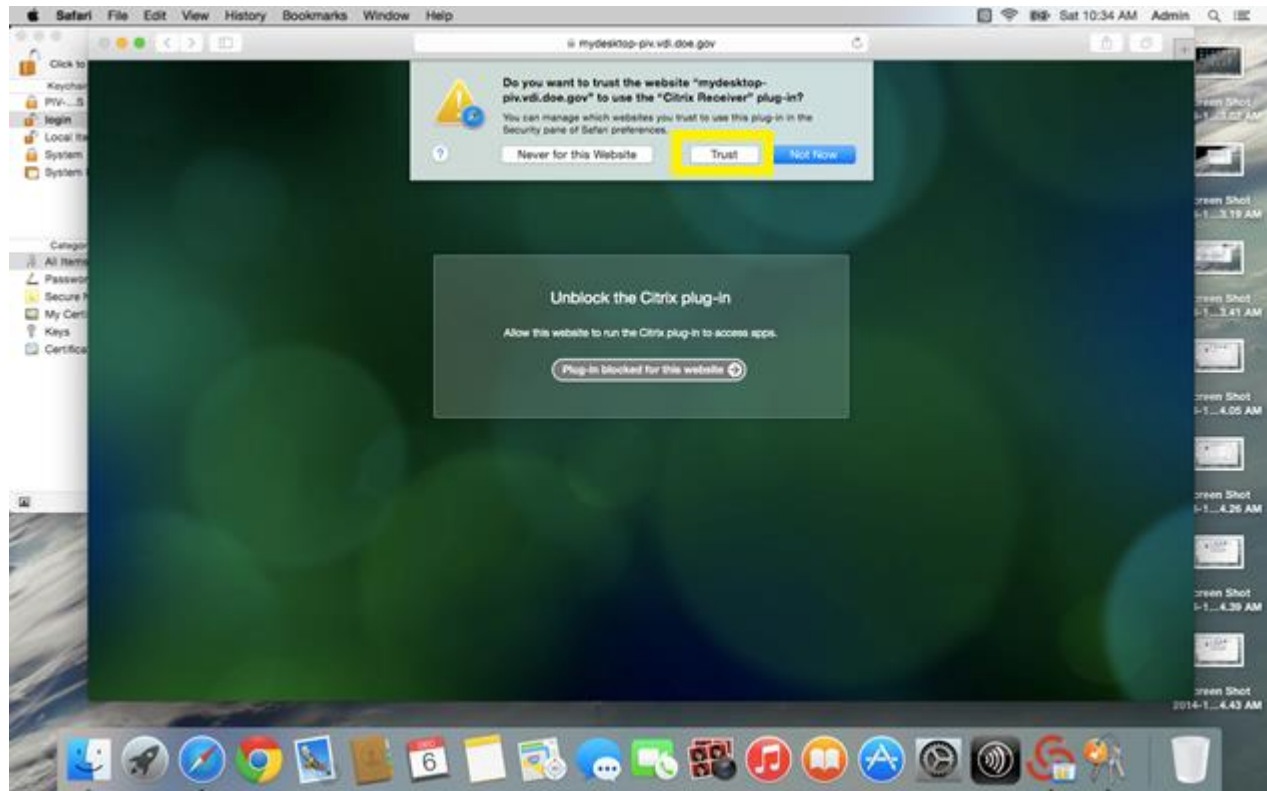
14. Your desktop displays.
    a. If you have a single desktop, it auto-launches.
    b. If you have more than one desktop, select the preferred desktop to launch.
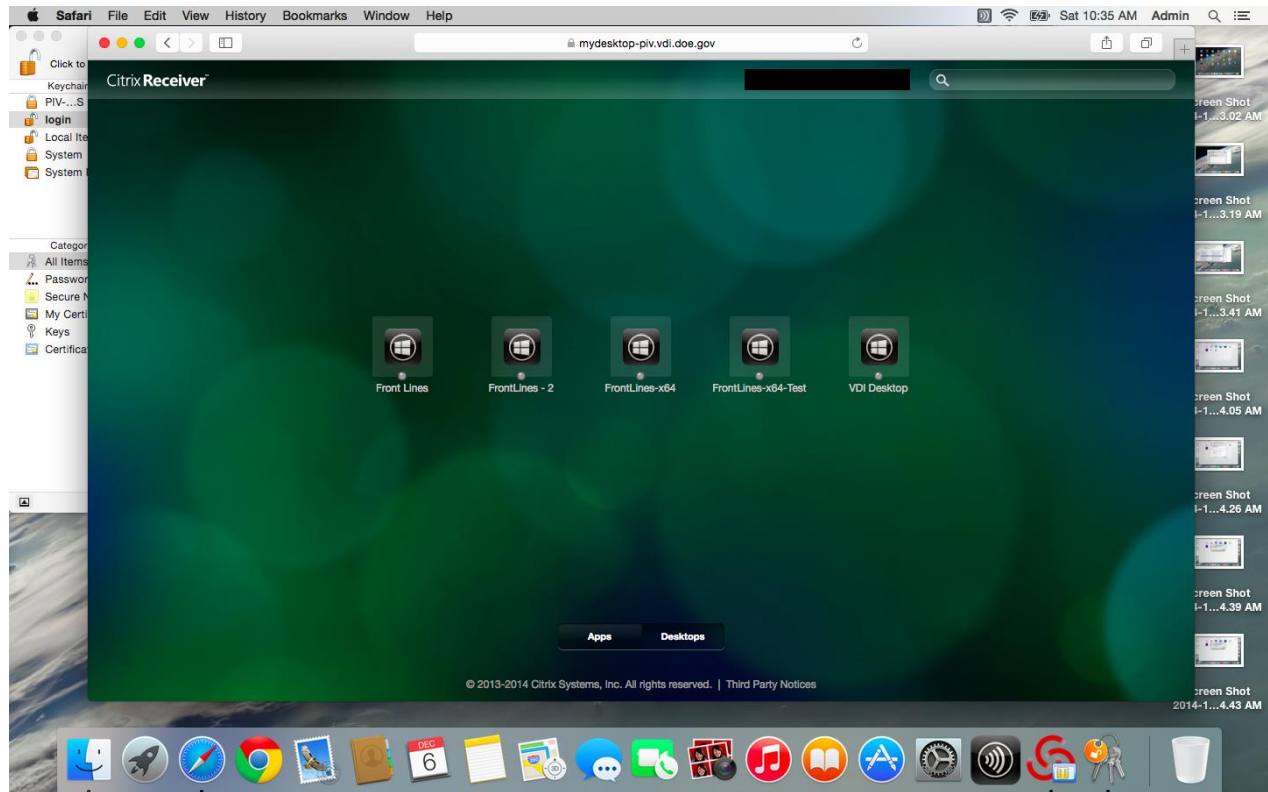
15. After the desktop has launched, the DOE Security Banner screen appears. Select **OK** to continue.
16. The desktop displays the message **Reading smart card...**
17. At the prompt, type your PIN and press **Enter**.
18. You are now logged on to the desktop.

7 Access from a Government Furnished Equipment (GFE) Mac

1. Insert a card reader and your PIV card.
2. Log on to your Mac using your PIV credential.
3. Open Safari or Chrome.
4. Go to HTTPS://MYDESKTOP-TEST.DOE.GOV.



5. Select **Access VDI using your PIV card**.
6. You are prompted to select a certificate. Select the **Show Certificate** button and scroll down to **Purpose #2 Smartcard Logon**.

7. After verifying the certificate, select **Continue.**

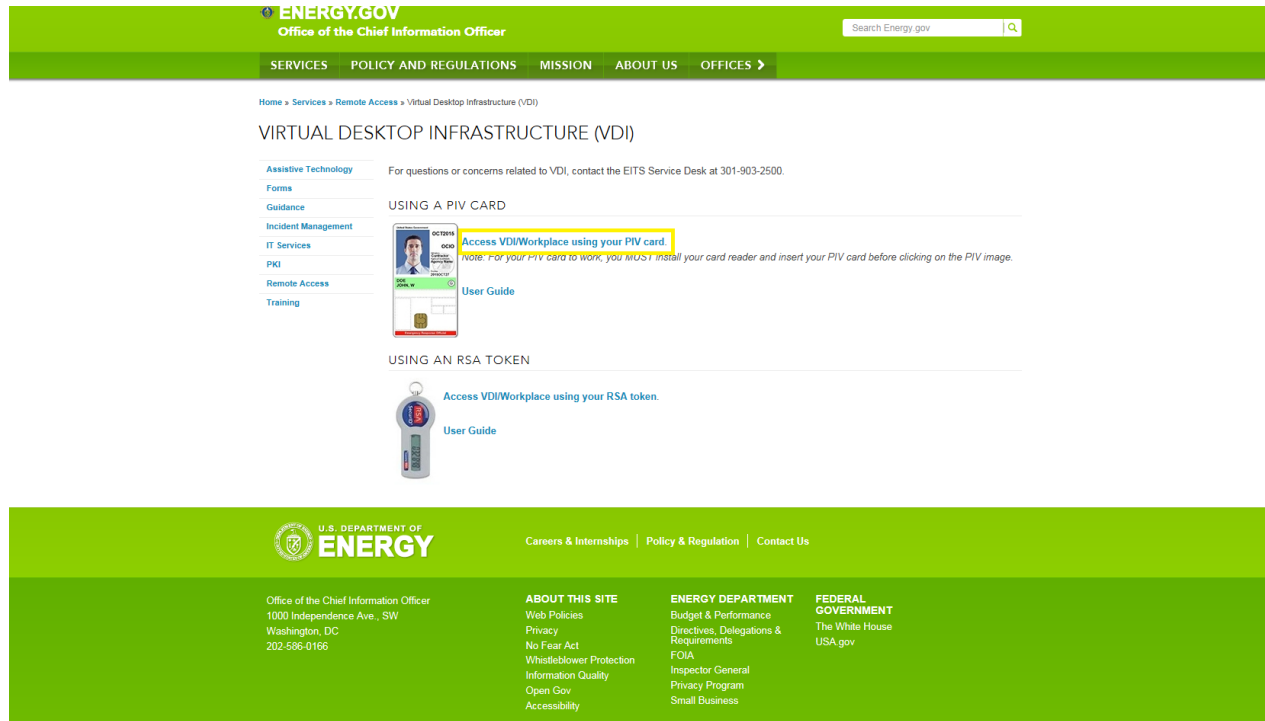8. You are not required to enter your PIN because it was cached during logon to your Mac.

9. At the prompt **Do you want to trust the website "mydesktop-piv.vdi.doe.gov" to use "Citrix Receiver Plug-in?"**, select **Trust** to unblock the Citrix plug-in.

.
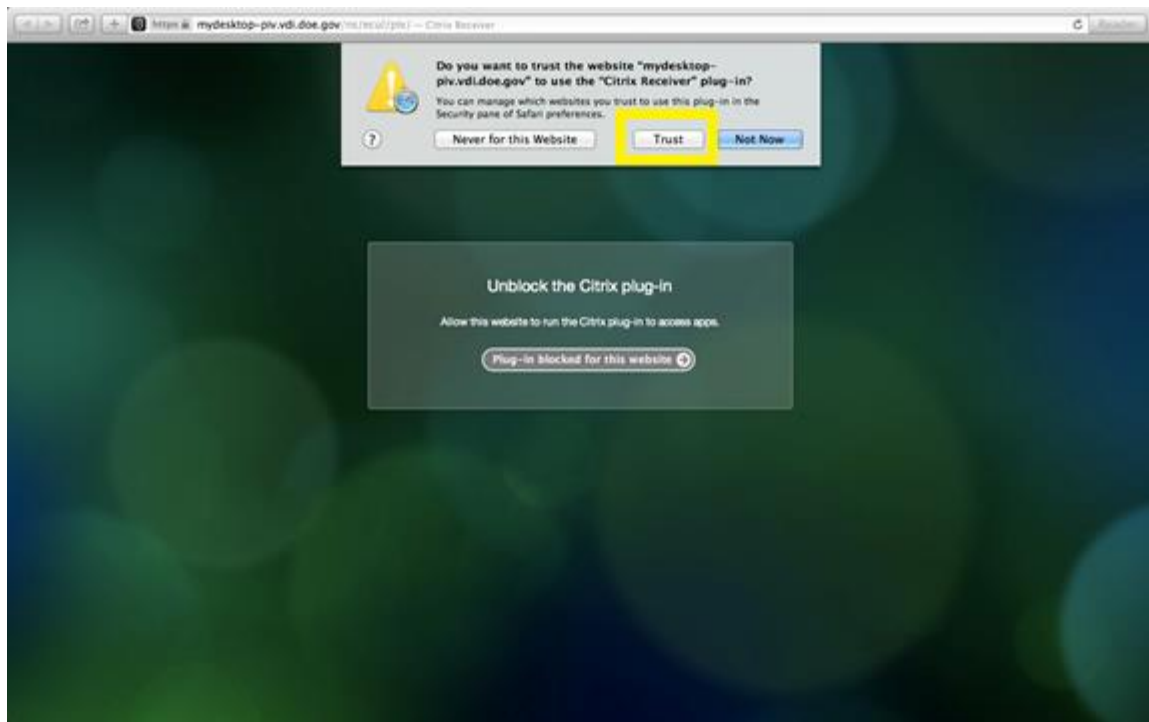
10. Your desktop displays.
    a. If you have a single desktop, it auto-launches.
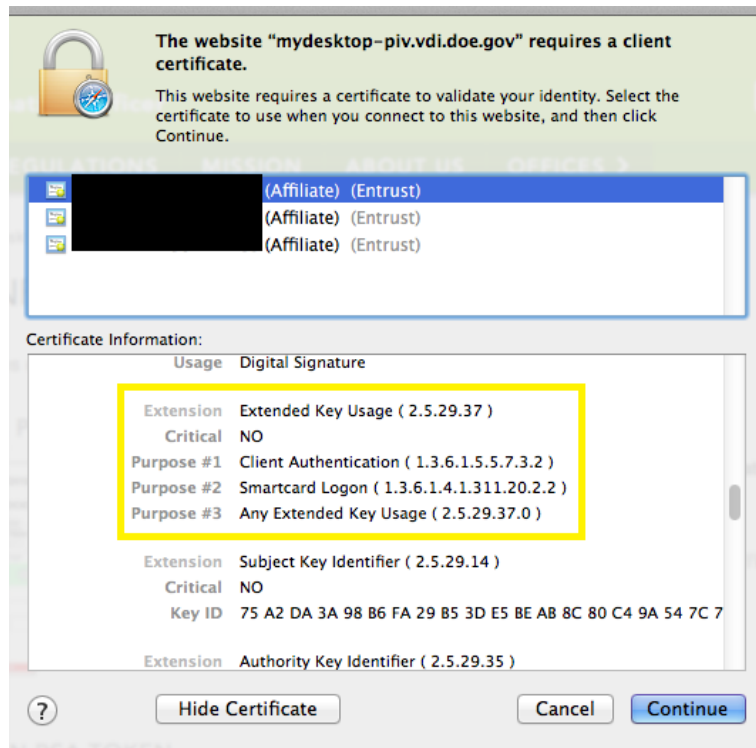   b. If you have more than one desktop, select the preferred desktop to launch.
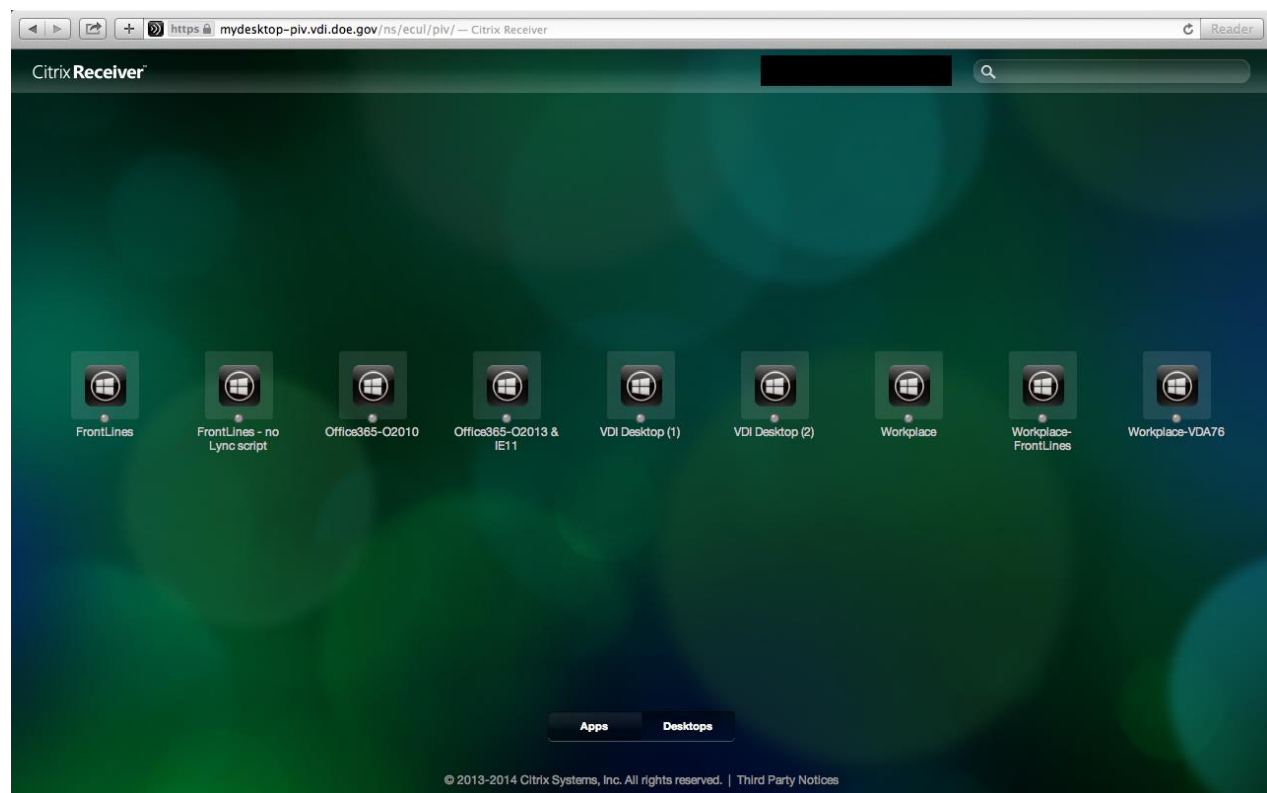
11. After the desktop has launched, the DOE Security Banner screen appears. Select **OK** to continue.
12. The desktop displays the message **Reading smart card…**
13. At the prompt, type your PIN and press **Enter**.
14. You are now logged on to the desktop.

Appendix A: Remove an Incorrect Certificate

If you select the wrong certificate in Safari, you must remove it from the Centrify Express for Smartcard keychain to be prompted to select a certificate again.

1. If the certificate did not show **Purpose #2 Smartcard Logon**, you have selected the wrong certificate.
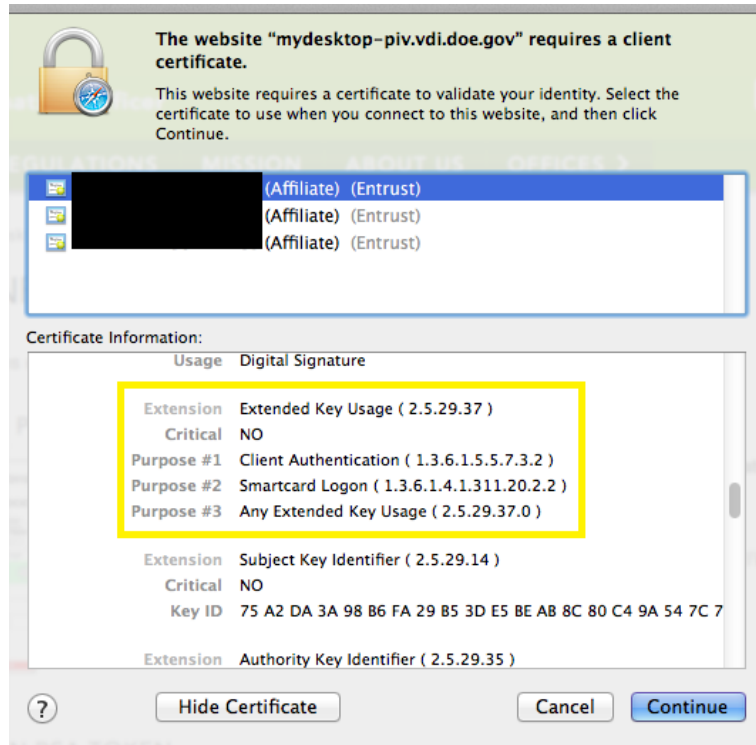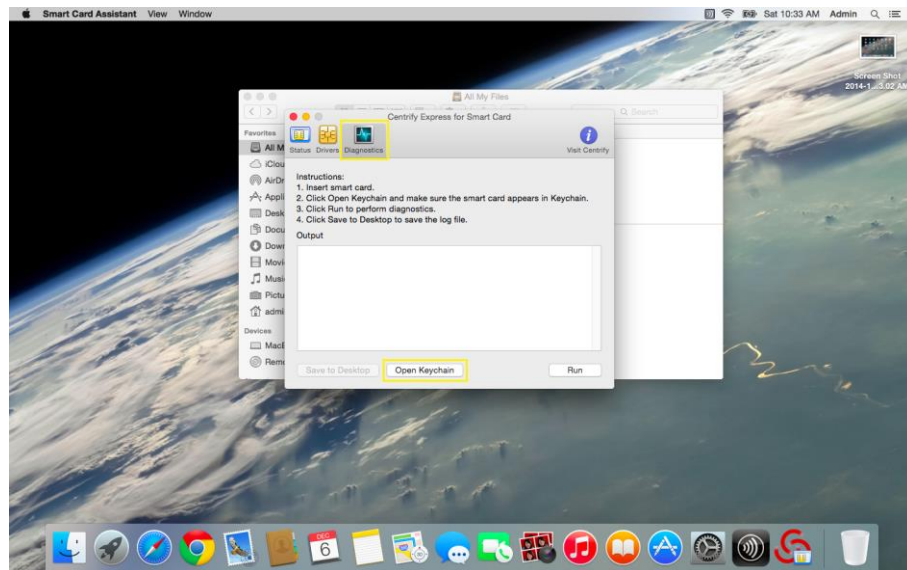

2. Open **Launchpad** and open **Smart Card Assistant**.
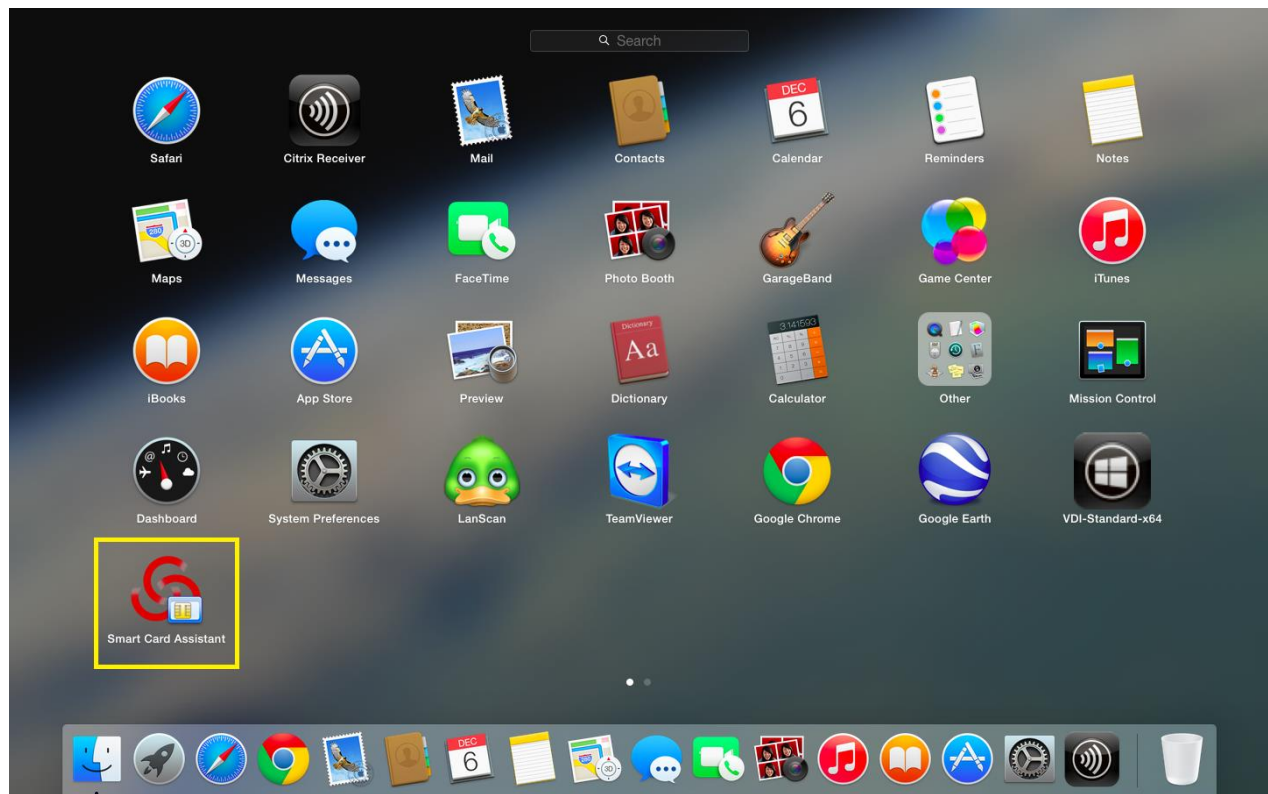
3. Select **Diagnostics**, then press the **Open Keychain** button.

4. On the left, select login under **Keychains,** then select **All Items** under **Category**.

5. On the right, select the identity preference entry and select **Delete**.
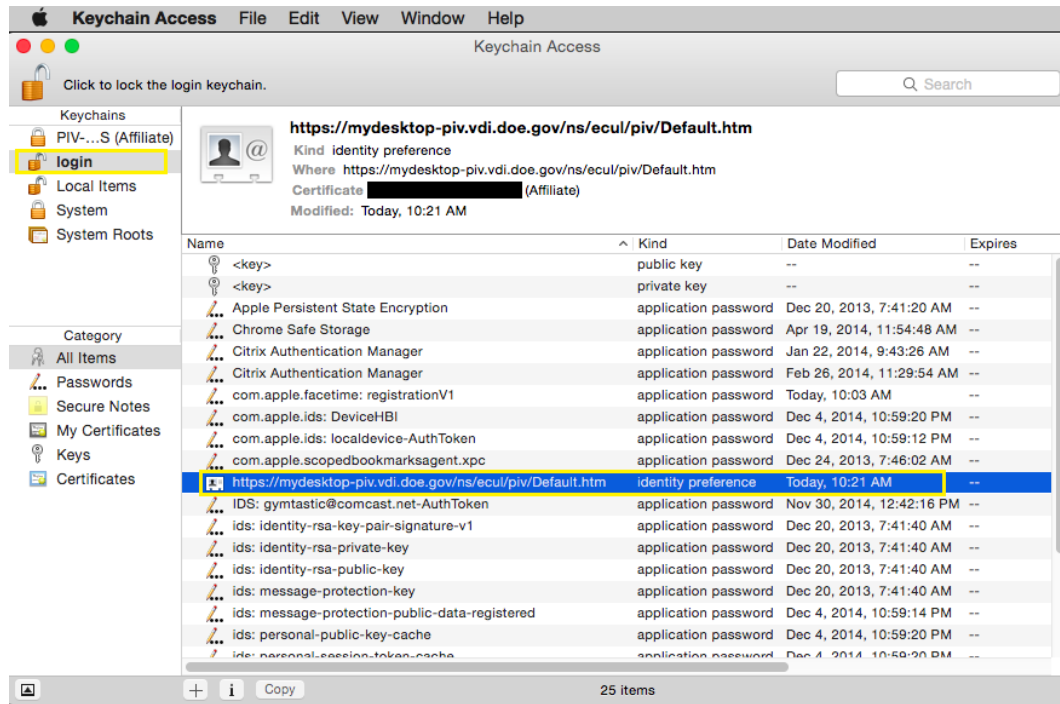
6. Go back to section 6, *Access from a Home Personal Mac*. Go to step 6 to log on again. The system prompts you for the correct certificate.

Appendix B: Troubleshooting

If you select the wrong certificate after entering your PIN, an error message states the page cannot be displayed. Follow these troubleshooting steps to select the correct certificate.
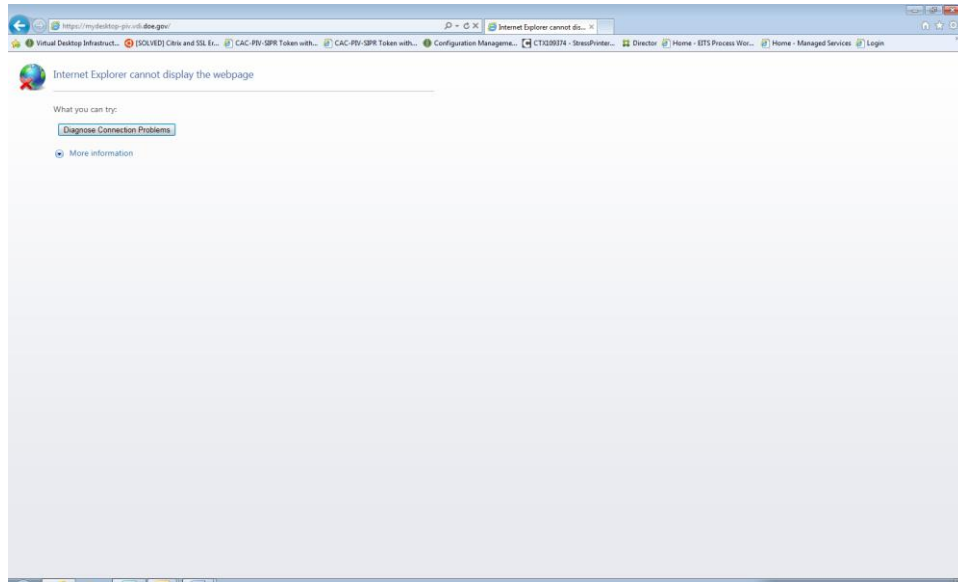
1. Close the browser.
2. Remove your PIV card from the reader, then re-insert it.
3. Open the browser again.
4. Go back to the logon instructions to select the correct certificate.

If the wrong certificate was chosen in Safari, first follow the steps in Appendix A, *Remove an Incorrect Certificate*, then follow the instructions.

Appendix C: Google Chrome (version 42) and Citrix Receiver

In April 2015, Google disabled Netscape Plugin Application Programming Interface (NPAPI) plug-in support in Chrome version 42 to improve security and stability. The NPAPI plug-in for Windows and Mac enables users to launch applications by selecting them. The removal of NPAPI support impacts those who access Citrix Receiver for Web using the Chrome browser on Windows and Mac.

In September 2015, Google will remove the override and NPAPI support will be permanently removed from Chrome version 45. Installed extensions requiring NPAPI plugins will no longer be able to load those plugins. Citrix is working on a non-NPAPI plugin in upcoming Receiver releases.